reviews

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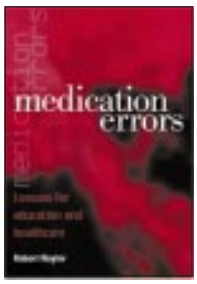
Medication Errors: Lessons for Education and Healthcare

Robert Naylor



Radcliffe Medical Press, £29.95, pp 344
ISBN 1 85775 956 7

Rating: ★★★

Like many who have made an in-depth examination of medical error, Robert Naylor seems to have been profoundly affected by his explorations. This is a book that charts the literature on medication errors and displays a passion shared by Harvard professor Lucian Leape and others in arguing that we *can* and *must* do more to stop harming patients (*BMJ* 2000;320:725-6).

Naylor notes that his concern "to report and then reduce drug-induced adverse events and medication errors has opened a Pandora's box," and this is indeed the case. What starts as a detailed overview of the literature and policy context of medication errors develops into an indictment of the current system of medical education and a call to ensure that prescribers have a much better grounding in pharmacology and therapeutics.

Anyone who has followed the literature on medication error will know that tackling system failure, rather than blaming individuals, is seen to be the best approach to improving safety. Naylor does not challenge this notion, but he points out forcefully and repeatedly that the commonest cause of medication error is lack of knowledge among healthcare professionals. Such errors may be couched in terms of systems failure but Naylor argues that anyone "who advances on a patient armed with a drug in the absence of a knowledge of its use is grossly irresponsible."

Naylor's concerns lead him to a detailed examination of medical curriculums in which he argues that recent trends have diverted attention away from providing doctors with essential knowledge of pharmacology and therapeutics to focusing on wider societal concerns. He argues that the pendulum has swung too far in this direction and that a reduction in the factual content of courses "has given rise to serious concern about future competence."

This book provides a detailed summary of the literature on medication errors and will prove useful to many health professionals and academics. As a single author, Naylor has performed an impressive feat in covering the topic. There are, however, areas where the book could have been improved by bringing in other experts in the field. In particular, while he makes important points about the deficiencies of medical education, I thought that his answers to the problem were not well developed. Nevertheless, I found it refreshing to have an author write so passionately about his subject. While Naylor recognises that various interventions can help to prevent medication errors he remains convinced that potential prescribers need much better training before they are set loose on patients.

Tony Avery *head of division of primary care, School of Community Health Sciences, University of Nottingham Medical School*
tony.avery@nottingham.ac.uk

Wine: A Scientific Exploration

Eds Merton Sandler, Roger Pinder

Taylor and Francis, £65, pp 336
ISBN 0 415 24734 9
www.tandf.co.uk

Rating: ★★★★

There's something about the fermented juice of grapes that attracts doctors. Hippocrates recommended wine as a treatment for almost all illnesses, although he drew the line at giving it to patients with meningitis. Christopher Rawson Penfold, the founder of one of Australia's leading wineries, was a young English doctor who emigrated to Australia in 1844 and soon realised that there was more to life than setting broken bones in the outback.

The editors of this book have gathered together a formidable international taskforce of physicians, scientists, and wine specialists. They present the scientific evidence to support the belief that a little of what you fancy does you good (especially if it's red and made from Merlot or Pinot Noir grapes).

Rosemary George, a wine writer and master of wine, sets the scene in the first chapter called "Drinking Wine." She explores the four main factors that determine the taste of a glass of wine: the grape variety, the soil, the climate, and the human hand of the winemaker. I think it is a serious omission to leave out the company of fellow drinkers, but she later admits that drinking wine is above all about friendship, love, conviviality, and good conversation.

After a thorough recitation of the history of wine as a medicine, the heavyweight epidemiologists are wheeled out to look at the evidence behind the assertion that wine is protective against heart disease. They conclude that light to moderate drinking does indeed lower the risk of coronary heart disease. But is it the wine, or is it the ethanol? Michael Marmot and Martin Bobak are not yet convinced that it is the wine, citing "residual confounding by other factors" as the reason why some studies have favoured wine over beer and spirits. This view is supported by Arthur Klatsky from Kaiser Permanente in California, who presents the evidence on all forms of cardiovascular disease, including hypertension, stroke, and peripheral vascular disease.

Most of the second half of the book deals with the chemical compounds with putative beneficial effects: flavonoids, polyphenols, resveratrol, and related substances.

The chapter by Roger Pinder and Professor Carole Meredith on the identity and parentage of wine grapes should be required reading for all wine-drinking geneticists. Professor Meredith published a seminal paper in *Science* in 1999 that revealed the parentage of the Chardonnay grape. One parent is Pinot; the other is a miserable eastern European grape called Gouais Blanc. Chardonnay has never tasted as good since then, although I'm always willing to give it another chance if it comes from Burgundy.

Fred Kavalier *primary care geneticist, Guy's Hospital, London*
kavalier@btinternet.com

Items reviewed are rated on a 4 star scale (4=excellent)

NETLINES

● The use of drugs in sport is an increasingly serious issue for both competitors and their medical advisers. Drugs in Sport (www.drugsinsport.net/) is a portal that brings together a range of handy online resources, from news items about athletes who have failed drugs tests and banning the use of the herbal stimulant ephedra to links to global organisations such as the World Anti-Doping Agency and the Anti Doping Commission of India.

● Interplast UK is the United Kingdom branch of an international organisation that seeks to provide free plastic surgery facilities for children in countries that lack sufficient resources. The organisation's compact but well designed website (www.interplast.org.uk) explains the kind of work carried out, from keloid removal to cleft palate surgery, and gives details of how to volunteer to participate in future trips.

● The web is a great place to publish a large number of statistics, facts, and figures. The Hong Kong Department of Health has taken full advantage of this with a site on public health and disease surveillance (www.info.gov.hk/dh/diseases/content.htm). Topic headings, from tuberculosis to dengue fever, are listed simply on the home page and there are also Chinese versions available. This uncomplicated page is a gateway to a goldmine of data and is a useful model for others planning a similar type of site.

● Those interested in both London and medical history might want to check out a site dedicated to the city's museums of health and medicine (www.medicalmuseums.org). The site lists 20 medical and health related museums, such as the Alexander Fleming Laboratory and St Bartholomew's Hospital Museum, and there is a location map, information about opening times, and brief details about the main exhibits. This is a site that intelligently showcases London's rich medical heritage.

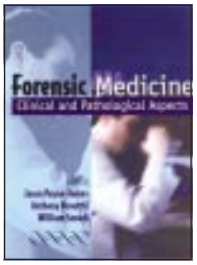
● The internet is full of health and medical news sites of varying quality. For a particularly good one visit CNN (www.cnn.com/HEALTH/index.html). Although it is aimed at the consumer, there is plenty here to interest the health professional, from hard news stories to magazine style features. This site offers an interesting perspective on the health preoccupations of the mainstream media.

Harry Brown *general practitioner, Leeds*
DrHarry@dial.pipex.com

We welcome suggestions for websites to be included in future Netlines. Readers should contact Harry Brown at the above email address.

Forensic Medicine: Clinical and Pathological Aspects

Eds Jason Payne-James, Anthony Busuttil, William Smock



Greenwich Medical Media, £135, pp 840
ISBN 1 841100 269

Rating: ★★★

Forensic medicine has humble and ancient origins. What are thought to be some of the first descriptions of how to examine injuries were found carved on pieces of bamboo dating back to the Qin dynasty in China, from about 220 BC. The first publication on forensic medicine in the United Kingdom was by William Hunter in the 18th century. His essays were on the injuries found on murdered bastard children. From these dark beginnings forensic medicine has developed into a large specialty with several subspecialties.

Forensic medicine must be one of the most unusual, and certainly one of the most macabre, branches of medicine. This complete and informative book is testament to that. There are detailed and candid descriptions of ligature marks, knife wounds, and the physical changes that the body goes through after death—all illustrated through photographs. Not reading for the faint hearted.

As doctors we are all too aware of the natural causes of death, such as cancer and heart disease, the top killers. Forensic medicine, however, deals with death by unnatural causes and even by intent—for example, through gunshot or knife wounds, through strangulation or drowning, in a house fire or by electrocution. Forensic physicians and forensic pathologists can be cast as the detectives of the medical profession. How, why, when, and by whom are all questions that they might need to answer. And the answers, as we see played out in countless television programmes, are often surprising and unexpected.

This 51 chapter multiauthor book provides readable, well illustrated, and detailed information on all aspects of forensic work. It is a valuable resource for forensic pathologists, physicians, and coroners, as well as for police investigators and lawyers. The first section is on the causes and investigation of death and injury. This is the bread and butter work of a forensic physician. The parts on how to describe injuries and the findings to expect are all well written and informative.

The second section is on practical investigation and management. Chapters here discuss physical and sexual assault, physical illness in custody, and substance misuse.

One of the main tasks of a forensic physician is to prevent false confessions from detainees. It is his or her job to recognise vulnerable people who may give non-coerced false confessions that can lead to a miscarriage of justice. The book devotes an excellent chapter on how to assess the fitness of a detainee to be interviewed. It details the personality traits, and the physical and mental health influences that need to be taken into account when assessing detainees.

A final section details the subspecialties of forensic medicine, such as forensic haematogenetics. This is the study of the genetic profile of a blood sample for use by the courts. Another chapter in this section describes the role and techniques in forensic entomology. Estimating the time of death in a murder investigation is vital. Entomology helps by looking at the age of maggots developing in the body and by examining the other insect fauna that infest the body during decomposition.

To work in forensic medicine there are a few traits that it is probably important to have. Suspicion is one. The other is a capacity not to be shocked. And as I have found from my own experience as a forensic medical examiner, a strong stomach would be a close third. This book answers many of the important questions of forensic medicine—the what, how, and when. It still leaves you, however, with a nauseous feeling of why.

Alex Vass *assistant editor, Best Treatments, London*
avass@bmj.com

PAUL FAITH/PA

Asking how, why, when, and by whom: a murder scene in Belfast

PERSONAL VIEW

On being a conscientious objector to military service in 1959

When I was 25 I was interviewed for a paediatric house officer post. Towards the end I was asked if I had anything to add. I said that I was registered provisionally as a conscientious objector and that the tribunal might soon be considering my case. While waiting with the other candidates, I was called back to be asked if I was a member of the Society of Friends. I said that I was not, but that I was prepared to explain my position. They did not want my explanation. Another candidate was offered the post.

I had a few weeks of my obstetrics job to run, but the thought of being out of work sent me into panic. The next morning one of the paediatric consultants called me: the appointed candidate had withdrawn, so did I want the post? They accepted the uncertainties of my future and I took the job.

Two months later in Kensington Town Hall I appeared before the tribunal. I thought I had prepared well. (Until then the biggest decision that I had made was to leave the boy scouts to concentrate on my O levels.) I had sent in my own statement and those from a consultant physician from my first job and two of my elders from university. People's readiness to help impressed me: the Edinburgh University senior lecturer had offered to attend in person if the date was convenient.

I took a witness. The headmaster of my old school said that he did not share my views, but respected the serious thought that I had put into making my decision. I presented myself politely and clearly, but my case was rejected.

It had been unpleasant, but not surprising. I appealed and received yet another polite letter: "For the assistance of the Appellate Tribunal in making arrangements for hearing the appeal, I am to ask you to be good enough to complete the questionnaire enclosed."

Meanwhile, I remained anxious. My father, a general practitioner, had no support for my position, but was tolerant of me. My brother tried to be helpful by telling our parents that I might be in prison for only a few months.

The appellate tribunal was at 2 pm on 2 November 1959, in Victoria. This time I took two witnesses: my headmaster and an elder from Edinburgh University, whose expenses were paid. Getting them there was one of my first experiences in management.

The members of the tribunal listened, mostly to my witnesses. Both said that they did not hold my position, but considered me exceptionally sincere. I was questioned briefly. As a doctor in the army I would be expected to carry a gun: if an enemy soldier broke in, would I be prepared to use it? I said that I would not.

I was told that my appeal was accepted, conditional on my working for two years and 60 days "in forestry or on the land, or full-time in a hospital, as orderly, porter, stoker or stretcher-bearer, or as a Doctor working under a public authority."

I took my witnesses out to dinner. During the meal, vaguely realising that I was keeping my parents waiting in anxiety over my welfare and the family image, I telephoned them.

Later I sent each witness a carefully chosen long playing record to express some of my immense gratitude.

I continued my job in paediatrics and later, with Ministry of Labour and National Service approval, moved to a junior post in psychiatry, the field in which I subsequently specialised.

I felt fortunate that the tribunal's restrictions, set to penalise me, let me do what I wanted to do. I had been terrified of being told that I must join the armed forces or go to prison, but also of being told to enter general practice. That would have meant facing difficult emotional matters with my father.

> I feared having to speak of my position to my medical seniors

As an egalitarian, I liked the appellate tribunal's manner of lumping together porters, stokers, stretcher bearers, and doctors. But I do not remember noticing, until my recent rereading of the papers, the capital D for doctors.

Sitting, with pen, paper, and a list of names outside the tribunal doors had been two elderly women. As I left each time, they asked my name and if I was treated fairly. With intense feelings on leaving the tribunal room and concerns to look after my witnesses, I forgot to ask who they were or why they were there.

In the book *On Being Wounded* (Fulcrum Publishing, 1991), Edward W Wood wrote of "the voices of my mothers" and suggested that female ancestors tried to protect American men from aggressive excesses. I like to think that that is what those elderly women were trying to do for British conscientious objectors.

I had feared the tribunals. But even more I feared having to speak of my position to my medical seniors and, most of all, telling my peers. No one derided me. I was treated well.

Peter Bruggen *retired consultant psychiatrist, London pbruggen@blueyonder.co.uk*

SOUNDINGS

Complaints

I had often wondered about the real Bridge of Sighs. I remember first crossing the fake one in Cambridge on a rather misty night in late September 1976. It was interview time and I was with my friend Martin from Eastleach Primary School. We were somewhat intoxicated by a combination of the silent lights on the surface of the river and the sharp uncertainty of the future.

Finally, a generation later, I was crossing the real Bridge of Sighs in Venice. We were following our guide, Christina, our breath visible in the freezing air, around the secret passages of the Doges' Palace. She told us about the bocca di leone—lion's mouth letter box—into which informants put anonymous allegations of corruption in city officials. Unsurprisingly, there were malicious abuses of the system. In 1365 a law was passed stating that the allegations had to be signed and witnessed. Not only this, but if the allegations were found to be wilfully false, the person making the allegations would be subject to the same punishment that would have been inflicted on the maligned official if the allegations had been proved.

This news was greeted with vocal and noisy approval by my neurologist friend. Indeed, the story would have lifted the spirits of even the quietist of my medical colleagues. There is a general perception that the scales of justice are unreasonably weighed in the balance between the public and doctors. Reading the pathologist Geoffrey Hulman's personal account of being completely unjustly vilified (*BMJ* 2003;326:231) causes each of us to catch our breath. I remember a profile in the *Lancet* when an internationally renowned doctor was asked what he most feared. Professional disgrace, he said. There is a nightmare quality about these stories—an inert passivity we usually experience only in dreams. Fate strikes us and it seems that we are powerless.

I have, though, been on the other side and made two complaints about medical treatment. Once as a son in law and once as a general practitioner about the standard of nursing care. In both cases I felt the same sense of complete, passive impotence.

But I am becoming more assertive. In a restaurant within spitting distance of the Rialto bridge, I sent back a corked bottle of wine to possibly the most fearsome Italian matriarch on the planet. I still sweat about it now.

Kevin Barraclough *general practitioner, Painswick, Gloucestershire*